

CLAIMS

1. A lace lingerie article allowing the hold and support of a part of the female body, characterized in that the lace is produced from an elastic material which is simultaneously thermoformable, weldable and capable of the bonding of at least one reinforcing element, said lace being capable of undergoing, without damage to the lace thread, a permanent deformation by thermal forming during a molding operation for the production of lingerie articles in all the conventional sizes, and preserving, after deformation, a mechanical stability and an elasticity such that said articles maintain their capacity for supporting and holding that part of the body which they cover.

2. The lace lingerie article as claimed in the preceding claim, characterized in that said lace is composed of a mixture of polyamide and of elasthane.

3. The lace lingerie article as claimed in the preceding claim, characterized in that said lace is composed of 60 to 80% polyamide and of 20 to 40% elasthane.

4. The lace lingerie article as claimed in the preceding claim, characterized in that said lace is composed of 76% polyamide and of 24% elasthane.

5. The lace lingerie article as claimed in one of claims 2 to 4, characterized in that the polyamide is of the 6.6 type.

6. The lace lingerie article as claimed in anyone of the preceding claims, characterized in that the adhesive material used for the bonding of the reinforcing element or reinforcing elements is elastic and thermoactivatable at a temperature such that it can subsequently undergo thermal forming, while at the same time preserving the quality of the bond and maintaining after deformation, a mechanical stability and an elasticity which are compatible with supporting and holding that part of the body which said article covers.

7. The lace lingerie article as claimed in the preceding claim characterized in that the adhesive material is a polyurethane adhesive which is meltable at a temperature below the thermal forming temperature and which remains active during said thermal forming.

8. The lace lingerie article as claimed in the preceding claim, characterized in that the polyurethane adhesive is meltable from 180°C.

9. The lace lingerie article as claimed in anyone of the preceding claims, characterized in that the reinforcing element or reinforcing elements consist of a material capable of undergoing the deformation brought about by thermal forming, while at the same time maintaining, after deformation, a mechanical stability and an elasticity which are compatible with supporting and holding that part of the body which it covers.

10. The lace lingerie article as claimed in the preceding claim, characterized in that said material is an elastic

jersey allowing a substantially identical elongation longitudinally and transversely.

5 11. The lace lingerie article as claimed in the preceding claim, characterized in that said jersey consists of 85 to 95% polyamide and of 5 to 15% elasthane.

10 12. The lace lingerie article as claimed in the preceding claim, characterized in that said jersey consists of 89% polyamide and of 11% elasthane.

15 13. The lace lingerie article as claimed in one of claims 11 and 12, characterized in that the polyamide is of the 6.6 type.

20 14. The lace lingerie article as claimed in one of claims 9 to 13, characterized in that the reinforcing elements are provided in a material of which the responsiveness, the force exerted in order to obtain an elongation of 40%, is $1.1 \text{ N} \pm 0.5 \text{ N}$ longitudinally and transversely.

25 15. The lace lingerie article as claimed in one of the preceding claims, characterized in that it is manufactured from a lace strip preformed for the purpose of the article for which it is intended, the edges of said lace strip being reinforced in order to avoid the need for the fitting of elastic or elastics to said article, the latter being produced by cutting out at least one piece from one of the reinforced edges, without reaching the other edge, by the welding of said piece or said pieces and by the bonding of
30 at least one reinforcing element.

16. The lace lingerie article as claimed in the preceding claim, characterized in that the welding is ultrasonic.

17. A brassiere as claimed in anyone of the preceding claims, characterized in that it is manufactured from a lace strip preformed in such a way that its responsiveness, the force exerted in order to obtain an elongation of 40%, is $3.7 \text{ N} \pm 1.2 \text{ N}$ in the direction of length in the middle of the strip, $5.7 \text{ N} \pm 1.7 \text{ N}$ in the direction of length at the reinforced edges and $10.5 \text{ N} \pm 3.2 \text{ N}$ in the direction of width of the strip.

18. The brassiere as claimed in the preceding claim, characterized in that the lace strip has a width of approximately 30 cm.

19. The brassiere as claimed in one of the claims 17 and 18, characterized in that the cups are reinforced by means of a bonded lining.

20. The brassiere as claimed in one of claims 17 to 19, characterized in that the cups consist of two identical pieces of a shape such that the reinforced edges marking the bottom of each cup are arranged in a herringbone pattern after welding of one to the other.

21. A method for the manufacture of a brassiere satisfying the characteristics of claim 17 to 20, characterized in that it comprises the following steps:

- preforming, for brassieres, of a lace strip of a width of approximately 30 cm;

- cutting out of pieces to be assembled in order to form said brassieres;
- welding of said pieces;
- coating of the reinforcing material with spots of nonthermoactivatable polyurethane adhesive;
- bonding of a film of thermoactivatable adhesive material to said material;
- cutting out of reinforcing elements;
- connection of said reinforcing elements of the lace by the thermoactivation of the adhesive material;
- thermal forming of the cups at a temperature of between 190 and 200°C.

22. Panties, briefs or a thong as claimed in anyone of claims 1 to 16, characterized in that they are manufactured from a lace strip preformed in such a way that its responsiveness is $3\text{ N} \pm 1\text{ N}$ in the direction of length in the middle of the strip, $4\text{ N} \pm 1.2\text{ N}$ in the direction of length at the reinforced edges and $18.5\text{ N} \pm 5.5\text{ N}$ in the direction of width.

23. The panties, briefs or thong as claimed in the preceding claim, characterized in that the lace strip has a width of approximately 34 cm.

24. The panties, briefs or thong as claimed in one of claims 22 and 23, characterized in that the welded parts are reinforced by means of a bonded lining.

25. A method for the manufacture of lace panties, briefs or a thong satisfying the characteristics of claims 21 to 24, characterized by the following steps:

- preforming, for panties, briefs or thongs, of a lace strip of a width of approximately 34 cm;
- cutting out of at least one piece forming the panties, briefs or thong;
- welding of said piece or pieces;
- coating of the reinforcing material with spots of non-thermoactivatable polyurethane adhesive;
- bonding of a film of thermoactivatable adhesive material to said material;
- cutting out of reinforcing elements;
- connection of said elements to the lace by the thermoactivation of the adhesive material.